FORDYCE, (J. A.)

Reprinted from the New York Medical Journal
for February 16, 1889.

FATAL PERITONITIS

FOLLOWING OVARIAN APOPLEXY AT THE MENSTRUAL PERIOD.

By J. A. FORDYCE, M. D.

Fatal cases of peritonitis following menstrual suppression are among the rare occurrences of medical practice; at least, a search through the literature of gynæcology and personal inquiries of practitioners have failed to elicit reports of many such cases.

It has been my fortune to have observed two cases of death from peritonitis following menstrual suppression, in one of which an autopsy confirmed the diagnosis made during life.

Briefly stated, the history of the first case is as follows:

A single and previously healthy girl of twenty years of age, after exposure during menstruation, experienced violent pain in the lower abdominal region, soon followed by fever, rapid pulse, extreme abdominal tenderness and distension, vomiting of greenish-colored fluid, delirium, and death within forty-eight hours after the onset of the disease. Vaginal and abdominal examination in the beginning of her illness failed to discover any abnormal state of the pelvic organs. An autopsy was not allowed.

In the presence of the above-named symptoms a diagnosis of peritonitis was made. Occurring, as it did, after sud-

den suppression of the menstrual discharge, in an individual free from any local affection of the pelvic viscera, would be strong presumptive evidence in favor of a causal connection between the menstrual suppression and the peritonitis.

The other case occurred in a girl aged fifteen years, of previous good health. She had menstruated regularly for one year. Her mother attributed her illness to exposure to cold and wet at the time her menses were due; after such exposure she came home, and shortly afterward complained of chilliness and pain in the region of the right ovary. Fever, delirium, and rapid pulse were present almost from the onset of her illness. Her temperature (rectal) ranged from 102° to 104° F. At no time was there great abdominal distension, and, though she moved from one side of the bed to the other, she cried out frequently with pain. A marked degree of emaciation, together with a haggard and drawn condition of the features, were soon noticed. Diarrhœa of a light grade was present during her illness. During the thirty-six hours preceding death a greenish-colored fluid was vomited at frequent intervals.

Death resulted from heart failure after an illness of eight days. An *autopsy* made eighteen hours after death by Dr. H. P. Loomis, whose report is here given, revealed the following condition of the abdominal and pelvic viscera:

Body well nourished. Moderate distension of the abdomen; appearance otherwise normal. At the request of the family, the head and thorax were not opened.

Abdomen.—On opening the abdomen, an abundant deposit of fibrino-purulent material was seen covering all the abdominal viscera and matting the coils of small intestines together. The deposit extended as high as the under surface of the diaphragm, but was most abundant in the lower part of the abdominal cavity. No tubercles were seen, and no abnormal condition of the vermiform appendix.

The intestines were normal; no ulcerations were found. The liver showed passive congestion, but was otherwise normal.

Spleen normal. Kidneys, cloudy swelling. The pelvic peritonæum was covered with a fibrino-purulent exudation.

At the junction of the right ovary and Falloppian tube a blood extravasation about the size of a cherry was seen. The blood seemed to have spread for a short distance between the layers of the broad ligament. No pus was found.

On opening the ovary by a longitudinal incision, the cut surface was intensely red and full of tortuous vessels. A *corpus hæmorrhagicum* about the size of a hazel-nut was seen. There was a connection between this and the blood extravasation without.

A slight catarrhal condition of the right Falloppian tube was noted.

Left tube and ovary normal. Uterus normal; blood-stained mucus covered its mucous membrane such as would appear after a recent menstruation.

Vagina normal; hymen present.

Dr. H. P. Loomis has informed me in a personal communication that he had performed autopsies in two cases of death following sudden menstrual suppression, in both of which a general peritonitis was found, which seemed to have originated in the pelvic region, but in neither of these cases was there an ovarian blood-cyst nor any cause, aside from the sudden suppression of the menstrual flow, to account for the fatal peritonitis.

In the literature at my command I have failed to find the detailed reports of any similar cases, though Schroeder, in the eighth German edition of his "Krankheiten der weiblichen Geschlechtsorgane," under the heading of hyperæmia and hæmorrhage of the ovaries, says that rupture of a Graafian follicle may in exceptional cases be followed by so profuse a hæmorrhage that it can (1) prove directly fatal; (2) cause a peritonitis which may terminate fatally; (3) produce a capsulated blood-clot in the peritoneal cavity; (4) form a retro-uterine hæmatocele.

Graily Hewitt (page 491 of the first American edition of his "Diseases of Women") discusses the subject of apoplexy of the ovary and explains the occurrence of blood-cysts and their rupture into the peritoneal cavity in the following manner: A Graafian follicle does not rupture as it should into the Falloppian tube; hæmorrhage takes place within it; it enlarges from continuous bleeding and rupture occurs. Should the bleeding be profuse, an intraperitoneal hæmatocele would be produced. Such an intraperitoneal hæmorrhage seldom causes a fatal peritonitis.

Olshausen ("Die Krankheiten der Ovarien," page 27) divides ovarian apoplexy into two varieties: (*a*) that which takes place in the follicle; (*b*) that which occurs in the stroma of the organ.

The first variety, by far the most frequent, occurs in the great majority of cases at the time of the menstrual congestion as a pathological exaggeration of the normal menstrual hyperæmia.

As causes of such follicular hæmorrhages he gives, quoting Winckel, general diseases impairing the quality of the blood, congestions of the abdominal organs, heart failure, phosphorus poisoning, extensive burns, etc.

As a rule, such blood-cysts do not burst, but terminate in absorption of their contents.

Should rupture occur, the case might terminate in one of the ways before mentioned.

Sir James Y. Simpson, in his "Clinical Lectures on the Diseases of Women," quotes Bernutz as giving twenty cases of pelvic peritonitis out of ninety-nine as a result of menstrual suppression. The author remarks, however, that, as nearly all such cases terminate favorably, it is impossible to detect the part primarily affected.

Thomas ("Diseases of Women," fifth edition, page 664), writing of ovarian apoplexy, says the great danger in such

cases is from peritonitis arising from implication of the peritoneal fold which forms the broad ligament, or from rupture of the cortical portion of the ovary and the occurrence of hæmatocele.

In conclusion, I may say that the autopsy in the second case reported renders it extremely probable that the blood extravasation was the starting-point of the peritonitis which became general and proved fatal. Why, in the absence of any previous pathological condition of the uterus or its appendages, the presence of so small a quantity of blood without an added septic infection should cause a general peritonitis is not wholly clear. If, following the irritation to the peritonæum by the blood-clot, a secondary infection took place, its origin can not be accounted for by any previous abnormal condition of the genital organs nor by infection through the lymph-vessels following a vaginal examination, as no such examination was made.

66 West Fortieth Street.